

<b>Notice of Allowability</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/788,892	POWELL, DON C.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Walter L. Lindsay, Jr.	2812	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to an RCE filed on 12/8/06.
2. ☒ The allowed claim(s) is/are 1-39.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All    b) ☐ Some\*    c) ☐ None    of the:
  1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
  - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
    - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
  - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |   |  |
|---|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892)  | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 6. <input type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date _____. |
| 3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),<br>Paper No./Mail Date <u>08/04</u> | 7. <input type="checkbox"/> Examiner's Amendment/Comment                               |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material                            | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance   |
|   | 9. <input type="checkbox"/> Other _____.   |

### DETAILED ACTION

This Office Action is in response to an Amendment filed on 12/8/05.

Currently, claims 1-39 are pending.

#### ***Allowable Subject Matter***

1. Claims 1-39 are allowed.
2. The following is an examiner's statement of reasons for allowance: the prior art, either singly or in combination fails to anticipate or render obvious, the limitations of:
  - ...passing reaction gasses over the substrate to deposit the dielectric film forming a blanket dielectric deposition over substantially the entirety of at least one surface of the substrate, wherein the reaction gasses include a silicon bearing component, the oxidizing component, and a chloride component, and wherein the silicon bearing component and the chloride component are included within distinct ones of the reaction gasses introduced into the chamber, as required by claim 1;
  - ...passing reaction gasses over the substrate forming a blanket dielectric deposition over substantially entirety of at least one surface of the substrate, wherein the reaction gasses include a silicon bearing component, the oxidizing component, and chlorine, and wherein the silicon bearing component and the chlorine are included within distinct ones of the reaction gasses introduced into the chamber, as required by claim 9;
  - ...passing reaction gasses over the substrate to deposit the dielectric film forming a blanket dielectric deposition over substantially the entirety of at least one surface of the substrate, wherein the reaction gasses include a silicon bearing component, the

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oxidizing component, and a hydrogen chloride, and wherein the silicon bearing component and the hydrogen chloride are included within distinct ones of the reaction gasses introduced into the chamber, as required by claim 13;

...passing reaction gasses over the substrate to deposit the dielectric film forming a blanket dielectric deposition over substantially the entirety of at least one surface of the substrate, wherein the reaction gasses include a silicon bearing component, the oxidizing component, an ammonia component and a chloride component, and wherein the silicon bearing component and the chloride component are included within distinct ones of the reaction gasses introduced into the chamber, as required by claim 17;

...passing reaction gasses over the substrate to deposit the dielectric film forming a blanket dielectric deposition over substantially the entirety of at least one surface of the substrate, wherein the reaction gasses include a precursor component, the oxidizing component, an ammonia component and a chloride component, and wherein the precursor component and the chloride component are included within distinct ones of the reaction gasses introduced into the chamber, as required by claim 22;

...depositing a blanket dielectric layer over substantially the entirety of the substrate by passing reaction gasses over the substrate, wherein the reaction gasses include a silicon bearing component, an oxidizing component, and a chloride component, and wherein the silicon bearing component and the chloride component are included within distinct ones of the reaction gasses introduced into chamber, as required by claim 30;

...wherein the semiconductor device includes one or more gates, and wherein the dielectric layers forms one or more spacers for isolating the one or more gates from one or more contacts, as required by claim 34;

... wherein the semiconductor device includes one or more gates and one or more metal layers, and wherein the dielectric layer forms a cap over the one or more gates and the one or more metal layers, as required by claim 35; and

...thermally oxidizing at least all non-insulator portions of the surface of the silicon substrate, in the furnace tube, using gaseous reactants, which include a chloride component, dichlorosilane, and nitrous oxide, wherein the chloride component and the dichlorosilane are included in distinct gasses introduced into the furnace deposition tube, as required by claim 36.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Walter L. Lindsay, Jr. whose telephone number is (571) 272-1674. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael S. Lebentritt can be reached on (571) 272-1873. The fax phone

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number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Walter L. Lindsay, Jr.  
Examiner  
Art Unit 2812

WLL

February 16, 2006

